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ABSTRACT

A Multimedia Learning Laboratory Program was developed at a post-secondary vocational campus to: (1) provide help in reading, math, and study skills for students with inadequate educational backgrounds, (2) provide a means by which students may enter a program at times other than the start of the school year, (3) facilitate articulation of students from secondary vocational-technical programs, and (4) provide for student self-developmnt. This publication discusses the development of the facility along with a discussion of the staffing, program development, and development of curriculum oriented materials. An evaluation of the program by students and faculty revealed that: (1) The number of students utilizing the laboratory increased 37 percent over the first year of operation, (2) Over 70 percent of the students felt that their experience in the laboratory had made them more confident and had improved their academic standing, and (3) Over 80 percent of the faculty felt that their students had benefited from the laboratory. A listing of the laboratory equipment and software along with student and faculty evaluation questionnaires and tabulations are appended. (SB)

June 19, 1973

ABSTRACT

Vocational Campus Multimedia Learning Laboratory Program-Extension
Final Report VEA Project No. 72-2-179

The Multimedia Learning Laboratory Program was developed at a post-secondary vocational campus to: (1) provide students with inadequate educational background with help in the areas of reading, math and study skills, (2) provide a means by which students may enter a program at times other than the start of the school year, (3) facilitate articulation of students from secondary vocational technical programs and (4) provide for student self-development.

Four areas of development were continued to reach the above objectives: (1) development of the Learning Laboratory facility; (2) staffing; (3) program development and (4) development of curriculum oriented materials.

An evaluation of the program was undertaken using a variety of measures including: number of students served, student survey, matched group comparison and faculty evaluation. In general the evaluation was quite positive.

The conclusion states the degree to which each objective was met. It also indicates the acceptance of the program by students, faculty and administration and a commitment by the administration to continue the program.

Appendices listing equipment, software, and questionnaires are included.

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FINAL REPORT

V E A PROJECT NO. 72-2-179

VOCATIONAL CAMPUS MULTIMEDIA LEARNING LABORATORY PROGRAM

STATE UNIVERSITY OF NEW YORK
AGRICULTURAL AND TECHNICAL COLLEGE AT ALFRED
VOCATIONAL DIVISION
WELLSVILLE, NEW YORK

James L. Bliss
Project Supervisor

Robert J. Cirulli
Developmental Counselor

The University of the State of New York
The State Education Department

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U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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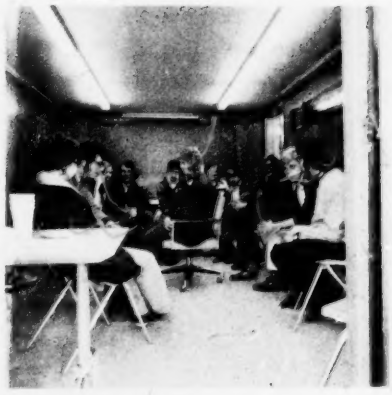
The State Education Department

August 1972

MULTI-MEDIA LEARNING LAB

***** RESOURCE CENTER *****



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The State University of New York Agricultural & Technical College at Alfred continued development of a Multimedia Learning Laboratory Program on its Vocational Campus in Wellsville, New York, for the 1971-72 academic year. This grant was awarded by the University of the State of New York, The State Education Department, from federal funds available under the Vocational Education Act of 1963. The purpose of this report is to summarize and evaluate the progress of this program for the academic year 1971-72.

INTRODUCTION

The Vocational Campus of Alfred State College has as its primary objective the development of skills in its students pertinent to a specific field, especially those where, due to the advancement in technology, the demand for highly skilled craftsmen is great. To meet this objective two year programs have been established in Automotive Specialist, Building Construction, Drafting, Electrical Services, Food Service and Business Office Skills.

Admission to these programs has been open to any high school graduate, regardless of high school academic record. As a result, a very heterogenous student population developed with a diverse set of needs which could not always be met within the regular class and lab situations. To help meet some of these needs, the Counseling Center - with support from the administration and faculty - was able to receive continued funding for a Multimedia Learning Center, which is now called the "Resource Center".

OBJECTIVES

The Objectives of this Multimedia Learning Center Program as stated in the original proposal are:

1. Provide students with inadequate educational background with help in the areas of reading, math and study skills.

2. Provide a means by which a student may enter a program at times other than the start of Fall Quarter.

3. Facilitate articulation of students from secondary Vocational Technical (B.O.C.E.S.) Programs.

4. Provide for student development.

DEVELOPMENT

Fulfillment of the above objectives necessitated four distinct areas of development: (1) the development of the Resource Center Facility including building, furnishings and equipment; (2) Staffing; (3) program development; and (4) development of curriculum oriented materials.

Development of the Resource Center Facility

BUILDING: The 1971-72 school year saw the size of the facility increased. The modular design of the structures allowed for the addition of a second section to the original building, thus doubling the size of the "Resource Center" to 1,156 square feet. The construction and electrical students attached and remodeled the two sections after a building contractor moved the new module from another part of the campus to its present site.

The carrols were removed from the original lab, which was then converted into a reception, lounge and display area, containing an occupational and educational information library and a paper back book gallery. Two offices were made available for the counselors and a third office was converted into a much needed store room.

The new section was divided into three laboratories with a combined capacity of 45 students. The reading lab with ten student carrols and the math and independent study lab with seven carrols were connected by a sliding door to allow for an overflow of students at any given time in either area. The third lab has no fixed seating arrangements and is used for group work

and seminars. See APPENDIX A. The cost of the total facility including remodeling was under $4500.00, which is approximately $4.00/sq. ft.

EQUIPMENT: The last of our equipment arrived in March. The Center now has four major complimentary multimedia learning systems: The Didactor System, 3M Sound on Slide System, ½ Video System and the Graflex Projection Reader Program; plus capabilities to utilize slides, movies, and cassettes and other standard audio visual materials. See APPENDIX B. It is felt that despite the loss of several pieces of equipment in the June flood (they are in the process of being replaced), the Resource Center is adequately equipped to handle the needs of the Vocational Division Students for the next several years.

Staff Development

The Resource Center staff, under the supervision of the Director of Counseling, consisted of the Developmental Counselor, one full time and 1 part time Technical Assistants and a stenographer supported by the grant.

The Developmental Counselor has a strong background in math, as a result of an undergraduate major in math education. His master's degree was in counseling and guidance. This combination enabled him to work effectively with students both from an academic and a counseling orientation.

The Technical Assistant had experience in working in a vocational education program, but most importantly had many years experience as a commercial photographer. He was the photographer for a large local industry, as well as owner of his own photography business prior to coming with us.

A part time Technical Assistant with an Associate Degree in Audio Visual Technology was added to the staff during the Spring.

The stenographer was a very personable young lady who combined efficient stenographic skills with a pleasant personality. This enabled her to work effectively with both students and staff.

Program Development

Program development has been a continuation of the previous year. The The laboratory now has capabilities to assist students in math from the simple operations of addition and subtraction through Freshman and College Algebra. The Didactor System is the heart of the math program, but in addition audio tapes and work books are also utilized. Students completing the Freshman or College Algebra program may take a challenge test on the Alfred Campus and if successful receive regular college credit.

The curriculum related materials were progressing with over seventy completed or in process. Those in process were waiting to be narrated by the faculty. The Developmental Counselor has been involved in the production of a portion of the programs particularly in narrating. At this time it is impossible to determine how many of the programs, which were not yet in the learning lab survived the flood. The entire Audio Visual facility was completely submerged. Materials in the various departments were also destroyed; but how much, we can't yet determine.

The 3M Sound on Slide System is being used for most curriculum materials. There are available in the lab such programs as: Operation of Hobart Food Cutter, Operation of Steam Master, Steelduct Conduit Bending, Single Phase Underground 200 amp Service, Cam Bearing Installation, and Cylinder Honing. In order to facilitate independent use of the lab, operating instructions for each piece of equipment were in the process of being made for use with this system, the easiest to use, but due to the flood they are still not completed.

Video tapes were made for the Construction Department of dry wall taping, but again, these were lost in the flood.

While little suitable commercial material is available for our curriculums, the Didactor System has a considerable number of programs dealing with maintenance

in the fields of electricity, electronics, mechanics, hydraulics, diesels, and instruments. Most of the theory in our truck diesel program is taught using the Didactors.

Other curriculums use various didactor programs that are relevant. The electrical department no longer teaches slide rule in class but requires their students to learn its operation on the Didactors in the Resource Center.

An interesting development has been the addition of self instructional foreign languages, with the result that the Food Service Department is going to stronly recommend that each of their students become acquainted with one foreign language. The Center has an independent study course in beginning typing.

The project Supervisor has been involved in producing ten thirty-minute video tapes related to occupations in the community in order to provide relevant information for students considering alternative career goals. As a community service, these video tapes were shown on a weekly basis over the local community tv cable station.

A list of programs and materials available in the Resource Center can be found in APPENDIX C.

The Multimedia Learning Laboratory program has been strengthened by the new approach instituted for the 1971-72 school year. The Counseling Center was combined with the Learning Laboratory and the facility became the Resource Center. As the learning laboratory program concept came about through counseling students experiencing a need for such a program, and the Director of Counseling was project supervisor, it appeared to be quite appropriate to have the two programs existing in one location and complimenting each other.

There are a number of advantages to this arrangement. The first and most important is the strengthening of the approach that each student using the Center is an individual and receives individualized attention whether it is

actually academic skill building or self concept development. By increasing the counseling orientation, the students have greater access to which ever area or combination of areas they need most.

A second advantage is that students coming in to see the Director of Counseling become aware of the assistance available in the learning lab with the Developmental Counselor and vice versa.

A third advantage is that the multimedia learning laboratory program can be expanded in the areas of study skills, job acquisition skills, human relations seminars through the services of the Director of Counseling. This provides the program with the means to meet its fourth objective: that of student development.

EVALUATION

Students Served

Two hundred and forty students used the Multimedia Learning Laboratory portion of the Resource Center during 1971-72. This constitutes about 40% of the total student body and is a 37% increase over 1970-71. The assistance students received was primarily related to math and ranged from review of addition and subtraction of fractions for students in Food Service and Building Construction to College Algebra for students who had completed or challenged all required math in Drafting.

Seminars and individual work in study skills, reading, job acquisition skills and a forty-hour human relations course for Food Service Seniors were conducted.

Students worked on their own on curriculum oriented material such as electrical wiring, diesel engine repair and food service.

RESEARCH

Student Survey

A survey of students who had utilized the learning lab was conducted during the Spring Quarter. The main purposes of this survey were to determine whether the students felt they benefited from the time they spent in the lab and suggestions for improving the program.

Forty-three students were available to participate in this survey and of these, thirty-seven completed the questionnaire for a return of 86%.

The results appear quite positive. 78% felt their experience in the learning lab made them more confident. 77% felt the Learning Lab had helped them improve their academic standing. In regards to positive changes in their attitude toward their vocational interests, 51% felt there was. 80% recognized

improvement in their reading and/or math skills, while 94% felt that it will be helpful in their future occupation. 83% enjoyed their work in the Learning Lab and 92% considered time in the Learning Lab well spent. 60% felt they would continue work in the Learning Lab next year and 11% indicated they would not be here (Seniors). In response to reasons for coming to the Learning Lab, students said: for extra help, to learn more math at a slower pace, to better some of my skill in the automotive field.

What did you accomplish at the Learning Lab? "I learned how to use the slide rule", "a faster way of reading", and "more confidence in math, more knowledge".

Suggestions for improving the lab included, a broader range of subjects like languages and "Arodinamic"; have a reading class first quarter instead of last half of 2nd quarter, more help in getting students to use it.

The Questionnaire and complete data on each question can be found in APPENDIX D.

While the responses of the surveyed students were highly favorable, one should keep in mind that there were only thirty-seven students involved. The representativeness of this sample cannot be ascertained at this time, but from previous favorable verbal comments of other students, the sample may not be excessively biased.

Faculty Survey

A survey of the faculty in the Vocational Division was taken in Spring Quarter for the purposes of ascertaining their reaction to the Learning Lab and suggestions for its improvement.

The thirty-eight faculty in the Division were sent questionnaires; twenty-five were completed to yield a 66% return.

The results were as follows: 71% had referred students to the Learning Lab for help in math or reading. 87% felt their students had benefited from their work in the Learning Lab. Some specific examples of how they improved were: 5 students in math from D to C or C+, student saved from failing by reading programs, 3 improved from C to B.

Asked if the instructor knew what the Learning Lab had to offer, 67% responded - yes, 29% "somewhat", and only 4% did not know what services were available. 82% of the instructors felt there was a need for a Learning Lab on Campus.

Mandatory student attandance in the Learning Lab was favored by 86%, but only 64% felt that students should be released from shop time.

Suggestions for improvement of the Learning Lab elicited responses like: "Bring us up to date at times on what you have obtained or improved on; make more students aware of it; set up a schedule for students and make it mandatory they attend without taking lab time."

Tabulated results can be found in APPENDIX E.

In general the faculty felt that the Learning Lab was needed and helpful in most cases. One strong recommendation was to make attendance mandatory; another to publicize the services and programs in the Learning Lab more.

A positive reaction by the academic community beyond Alfred State College, to this project, might be surmised by the inclusion of the Final Report of the Vocational Campus Multimedia Learning Laboratory Program in the ERIC System with an abstract appearing in a forthcoming issue of Abstracts of Research & Related Materials in Vocational & Technical Education (ARMS).

DIFFICULTIES ENCOUNTERED

Student scheduling again was a problem. All students were in class and shop a straight six hours a day with only a 30 [illegible]te lunch break. With this situation two alternatives are open for the Learning Lab, either work with students prior to 10:00 a.m. (this with second shift students) and after 3:00 p.m. (first shift students) or have faculty release students during shop time. Also involved in this situation was whether work in the lab should be voluntary or required by instructors.

Instructors varied in their opinions as to which alternatives were best, but the Learning Lab Staff noted best results from students who were released during shop time and voluntarily sought help. This problem may be alleviated as more experience is gained using the various alternatives.

A second concern was the development of audio visual materials.

The two technical assistants were in constant demand by the faculty to develop material to be used in programs for the Resource Center. The Technical Assistants would finish all the visual portion, mainly slides, but then the faculty would be very slow in producing the audio portion. A number of different approaches were used, including having the Developmental Counslor narrate material provided by the faculty, but the problem persisted. Two instructors, one in electrical and the other in automotive were very responsible and carried through their programs quite efficiently.

One solution to this problem, taking into consideration that the faculty are in direct contact with students 30 hours per week while school is in session, is to hire faculty over the summer to produce multimedia programs.

A third concern was one of effective evaluation. As most of the work students did in the lab was of an individual nature, even when in a small

group, pre and post testing, when tried, did not lead to any conclusive results. Another difficulty was the variation of time students spent in lab. Some used it for several one hour periods while others came in daily most of the year. The idea of flexibility which is built into the lab program and is essential works against usual evaluation measures. Surveys of students and faculties evaluation of the Learning Lab did give some measure of the effectiveness of the program.

A completely unforseen difficulty in the form of the flood from Hurricane Agnes resulted in the complete destruction of the audio visual production lab and dark room. This facility, which was developed over the past two years with a combination of grant funding for supplies and college funding for the remainder, was in the basement of the Library Building and with three to four feet of water at ground level was completely submerged.

The number of programs lost will not be known for sometime. Besides those in the dark room destroyed (along with all records) many departments lost programs which they were completing.

The resource Center fared quite well, with only about two feet of water inside the building a minimal amount of damage occurred, the only major loss was a TV Camera which is in the process of being replaced. The catastrophy did prove that our structure was sturdy enough to withstand a flood.

CONCLUSIONS

The development of the Multimedia Learning Laboratory continued in 1971-72, by its merging with the Counseling Center in an expanded facility called the Resource Center.

The first area of the program development, that of building and equipping

the Resource Center has been completed for all practical purposes and should be able to effectively serve the student body of the Vocational Division for several years.

The second area, that of staff and program development, is well underway and meeting the objectives of:

1. Providing students with inadequate educational background with help in the areas of math, reading, and study skills.
2. Providing for student development

The development of curriculum oriented materials has progressed to the point that at least one department has decided to concentrate putting their first quarter course of study on the Slide On Sound System. They can then take students in for the second quarter and let them make up first quarter theory work on their own. This will then provide for meeting the remaining two objectives of the Center:

3. Provide a means by which a student may enter a program at times other than the start of the Fall Quarter.
4. Facilitate articulation of students from secondary Vocational Technical (B.O.C.E.S.) Programs.

After two years of operation the Multimedia Learning Laboratory program has proven itself in the eyes of the faculty and students as evidenced from surveys undertaken and the interest and cooperation shown by students, faculty, and administration.

APPENDIX A

MULTIAMEDIA LEARNING LABORATORY

Refer to Picture Composite

at Beginning of Report

APPENDIX B

RESOURCE CENTER
EQUIPMENT

ITEM	QUANTITY
Language Masters	4
Super Technicolor 810 Projector	1
Head Phones	8
Didactors	8
Didactor Slide Mate	3
Didactor Sound Mate	1
Honeywell Dual Elmo 8 Projector	1
Model AF Carrousel Projectors	4
Wollensak Cassette Recorders	4
Technicolor 1000B Projectors	2
Multiphone Panel	1
Dual Headphone Adapters	3
Interconnecting Cables	4
Panasonic Portable Tape Recorder	1
Rateometers	10
File Units	2
Storage Shelving	
Cabinet Storage	
Chalkboard	
Knox Projection Screens	2
Reading Accelators	4
Graflex School Masters	1
Graflex Junior Readers	16
Mirascreen	1
3M Sound on Slide System Projectors - Playback	2
3M Sound on Slide System Recorder	1
Super 8mm Sound Projector Bolex	1
SONY ½" Video Recorder AV3600	3
SONY ½" Video Camera w/Viewfinder	1
SONY ½" Video Camera AVC 3200	1
SONY Special Effects Generator	1
SONY ½" Video Monitor Model CVM-110V	3

APPENDIX C

RESOURCE CENTER
Soft Ware

SUPER 8 FILM LOOPS:

- Replacing Ignition Points
- Auto Safety Inspection
- The Jointer: Basic Use
- Installing a Convenience Outlet
- Rebuilding the Master Cylinder

VIDEO TAPES:

- The R.N.
- The Draftsman
- Occupations for Women at Preheater
- Apprenticeship Program: Road to a Career
- Retailing
- Food Service Industry
- Opportunities in Electronics
- The Licensed Practical Nurse

SOUND FILM STRIPS:

- Your Job Interview
- Choosing your Career
- Preparing for the Jobs The Seventies
- Trouble at Work
- Why Work at All
- Developing your Study Skills
- Functional Living Series (five film strips)

16mm FILMS

- Safe as Houses
- It Didn't Have to Happen

LANGUAGE MASTER CARDS:

- Vocabulary - 2 box
- Multiplication - 1 box
- Construction Terms - 1 box

RECORD:

- How To Improve Your Reading Skills

3M SOUND ON SLIDE PROGRAMS:

Steel Conduit Bending

Single Phase Underground 200A Service

Hobart Food Cutter

Steam Master

Valve Refacing

Valve Seat Refacing

Ridge Reaming

Cylinder Honing

Water Jacket Cleaning

Piston Expansion by Knierling

Vibration Damper Removal

Soft Plug Removal

Magnetic Crack Detector

Fly Wheel Ring Gear Replacement

Valve Grind by Knierling

Cam Bearing Installation

Engine Oil Prelubricator

Rear Main Oil Seal Installation

Oil Dye Leak Detection

Oil Gallery Plug Removal

DIDACTOR TAPES:

Safety and Electrical Maintenance

Using Electricity Safely & Efficiently

Using the Oscilloscope

Measuring Electrical Quantities a Maintenance Essential

Semiconductors and Solid State Electronics

DC Motors in Modern Industry

Algebraic Fractions

Algebraic Expressions Part II

Exponential Numbers

Introduction to Algebra

Beginning Work with Equations and Formulas

Slide Rule Multiplication and Division

Common Fractions: Multiplication and Division

DIDACTOR TAPES (Cont'd.):

Multiplication Drill I

Ratio, Proportion, Per Cent, Percentage

Hot to Read Scales

Introduction to Trigonometry

Principles of Torch Cutting (2)

Control Terminology and Methods of Automatic Control

Mechanical Principles of Governor Operation

Maintaining the Fuel System

Understanding the Diesel Air System

Operation of the Cummins PT Fuel System Components

Understanding the Functions of Pressure Control Valves

Understanding the Caterpiller Fuel System

Chemistry, Part I

Part I: Basics T Account

The Lie

The How of the Planning Process

Using Three Phase Power In Industry

Developing A Master Job Plan

Pert Fundamentals Introduction:

Reading Improvement for Professional People Part I

Reading Improvement for Professional People Part II

Reading Improvement for Professionsl People Part III

Chemistry, Part II

Chemistry, Part III

Chemistry, Part IV

DIDACTOR TAPES (Cont'd.):

Common Fractions: Addition and Subtraction

Division Drill II

Basic Hand Tools Part I

Pert Fundamentals - Network Logic:

Pert Fundamentals - Critical Path:

Pert Fundamentals - Replanning & Stimulation:

Pert Fundamentals - Probability:

Vocabulary, Part III

Vocabulary, Part IV

Vocabulary - Alert to Subsequent

Fractions Drill II

How to Read and Write Decimals

Work with Decimals

Using Addition, Sub. and Learning Percentage through Auto Repair Problems

Introducting Perimeter and Area Problems

Algebraic Expressions, Part I

Factoring

Exponents and Radicals

Imaginary and Complex Numbers

Quadratic Equations

Facts about Syphilis Part I

Facts about Syphilis Part II

Teamwork

Confidence

Nobody Understands Me

DIDACTOR TAPES (Cont'd.):

Hello Trouble

Popularity?

The Dilemma

The Clown

Talk is Cheaper

To be Free

The Eight-Point Bet

Maintaining the Fuel System

Basic Engine Lubricants

Engine Tune-Up

Engine Co-ponent Concepts Part I

Engine Components Part II

Understanding Gears & Gear Ratios

Basic Hydraulics

Learning About Torque Converters

Understanding the Fundamentals of Electricity and Magnetism

Automotive Batteries II, Servicing & Testing Procedure

DC Generators I - Intro. to DC Generator Principles

DC Generators II - Generator Testing Procedure

AC Genrators I - Understanding Alternator Principles

AC Generators II - Regular and Field Relay Operating Principles And Alternator Testing

Introduction to Transistors and Transistorized and Transistor Controlled Regulators

Learning about Cranking Motors

Troubleshooting Electrical Systems (Instoduction to Basic and General Procedures)

DIDACTOR TAPES (Cont'd.):

Slide Rule - Mult. & Div.

Pyramid - Area & Volume

Solids, Rectangular Prisms, Cubic Volume

The Circle - Diameter, Radius, Circumference Area

Trapezoid & Triangle, Area & Perimeter

Triangular Prism - Area & Volume

Cylinder - Area & Volume

SRA Equations Games

READING KITS:

SRA General RFU Reading for Understanding Kit

SRA Reading Laboratory IVa Kit

SRA Reading Laboratory IIIb Kit

EDL Controlled Reader Programs

Set AD - 10 Filmstrips & Workbooks

Set LK - 25 Filmstrips & Workbooks

Reader's Digest Adult Readings Kit

Graflex Projection Reading Program, Grade 7 & 8 - 25 Filmstrips w/ Workbooks

Graflex Projection Reading Program, Grades 9 & 10 - 25 Filmstrips w/ Workbo

High School/College - 25 Filmstrips w/ Workbooks

LANGUAGE TAPES:

Berlitz Basic Languages Course - French

Living Language Cassette Course - Spanish

Listen & Learn - Italian

Living Language Cassette Courses - French

Living Language Cassette Courses - German

Living Language Cassette Courses - Italian

AUDIO TAPE SETS:

The Relevance of Sound w/ Student Workbooks

Basic Arithmetic w/ Student Guide

Elementary Algebra w/ Student Guide

Intermediate Algebra w/ Student Guide

BOOKS:

Delmar Automotive Trade - answer book

Delmar Electrical Trade - answer book

Delmar Carpentry Trade - answer book

Delmar Carpentry Trade (B.C.)

Textbook Basic Mathematics Simplified - answer book

Paperbacks

High School Certification

Equivalency Examination - Reading Interpretation Tests

How to Prepare for the High School Equivalency Examination

Reading Efficiency Checks KL-LK

Study Guide for TV High School - Manpower Education Institute

Good Reading for Poor Readers - Spache and Garrard

Technical Drawing - fifth edition

Foundations of Food Preparation - Peckham

Book 2 System for Success (Instructor's)

High School Equivalency - Mathematics Curriculum Resource Handbook

" " " - Science " " "

" " " Testing Program of NYS Information Handbook

" " " Part I: Theory & Design of the Program

Barron's How to Prepare for the High School Equivalency Examination

BOOKS (Cont'd.):

Barron's How to Prepare for the High School Equivalency Examination: Reading Interpretation Tests

Teacher's Guide to Series Two Programmed Reading

Programmed Reading Teacher's Guide to Book 1

Useful English: Sentences & Paragraphs Part 4

Useful English: Spelling Part 3

The Language You Speak

The Newspapers you Read

The Letters You Write

The Phone Calls You Make

The Movies You See

The Television You Watch

The Turner - Livingston Communication Series

IEEE Student Journal - Sept. '68

Junior College Journal - Oct. '70

High School Chemistry Notebook

American History Review Book

Adventures in Appreciation Book 1, 2, 3

Review Digest of Mathermatics - Republic

Review Digest of Mathermatics - Cambridge

Basic Electricity Vol. I - XII

Communications Skills

Instructor's Guide to Accompany Communications Skills

Read Your Way

Maintaining Reading Efficiency

Occupational Outlook Handbook by Bureau of Labor Statistics

Increasing Reading Efficiency - Miller

College Reading Skills

BOOKS (Cont'd.):

Developing Reading Efficiency

Reading For the Main Idea

Learning to Read Through Experience

Food Preparation for Hotels, Restaurants and Cafeterias

Reading For Meaning Teacher's Manual - Grades 9, 10, 11, 12

Reading For Meaning Teacher's Manual - Grades 4, 5, 6

Reading for Meaning Teacher's Manual - Grades 7, 8, 9

Reading For Meaning (Students) 4 - 12

Preparation for the College Level Exam Program

A Chance to Go to College

Human Mating & Marriage

Selections from the Black - olive book

Selections from the Black - brown book

Selections from the Black - purple book

APPENDIX D

STUDENT
QUESTIONNAIRE

Directions: Circle if your answer is:	1 definitely yes	2 probably yes	3 undecided	4 probably no	5 definitely no

Questions 1-8

1. 1 2 3 4 5 Do you feel that your experiences in the learning lab have made yo more self confident?

2. 1 2 3 4 5 Do you feel that your experience in the learning lab has improved your academic standing?

3. 1 2 3 4 5 Do you notice any positive changes in your attitude toward your vo cational interest because of your experiences in the learning lab?

4. 1 2 3 4 5 Do you recognize any improvement in your reading and/or math skill because of your work in the learning lab?

5. 1 2 3 4 5 Do you feel that your work in reading and/or math will be helpful in your future occupation?

6. 1 2 3 4 5 Did you enjoy working in the learning lab?

7. 1 2 3 4 5 Do you consider your experiences in the learning lab as time well spent?

8. 1 2 3 4 5 Do you feel that you might continue working in the learning lab ne quarter, or next year?

9. Why did you come to the learning lab? _____

10. What did you accomplish at the learning lab? _____

11. What do you feel is the purpose of the learning lab? _____

12. What are your suggestions for improving the lab? _____

Responses from Student Questionnaire N = 37

	definitely yes	probably yes	undecided	probably no	definitely no
1. Do you feel that your experiences in the learning lab have made you more self confident?	35.1%	43.2%	13.5%	5.4%	5.4%
2. Do you feel that your experience in the learning lab has improved your academic standing?	32.4%	45.9%	16.2%	8.1%	
3. Do you notice any positive changes in your attitude toward your vocational interest because of your experiences in the learning lab?	27%	24.3%	16.2%	16.2%	18.9%
4. Do you recognize any improvement in your reading and/or math skills because of your work in the learning lab?	45.9%	35.1%	13.5%	2.7%	2.7%
5. Do you feel that your work in reading and/or math will be helpful in your future occupation?	67.5%	27%	2.7%	5.4%	
6. Did you enjoy working in the learning lab?	56.7%	27%	16.2%		2.7%
7. Do you consider your experiences in the learning lab as time well spent?	70.2%	21.6%	8.1%	2.7%	
8. Do you feel that you might continue working in the learning lab next quarter, or next year?	32.4%	27%	16.2%	5.4%	10.8%

Will not be here - 10.8%

APPENDIX E

FACULTY QUESTIONNAIRE N = 25

Please do not try to be kind but rather be frank and honest when responding to this questionnaire. No name is required on this sheet.

1. Have you ever referred a student to the Resource Center for help in Math or Reading? Yes 68% No 28% No response 4%

2. Did the student(s) seem to benefit from their work in the Resource Center? Yes 56% No 13% Somewhat 31%

3. In reference to the previous question (without mentioning any names) would you lis some specific situations on the back of this sheet. For example, the number of st who improve from a D to C or some other definite improvement or non-improvement.

4. Do you know what the Resource Center has to offer? Yes 67% No. 4% Somewhat 29%

5. Do you as an instructor feel that there is a need for a Resource Center of this type on Campus? Yes 72% Somewhat 10% No 18%

6. Do you beleive that students will attend the Resource Center on a voluntary basis, or must it be made mandatory by the instructor? Vo. 14% Mand. 86%

7. Do you beleive a student should be let out of lab time to spend time in the Resource Center? Yes 64% No 36%

8*. Would you let a student out of lab for one hour a day? Yes 5 No 9
For a half hour? Yes 10 No 5

9. Do you feel that the math and/or reading tutor has been cooperative? Yes 81% No ____ Somewhat 19%

10. How can the Resource Center be of greater value to you? What suggestions can you offer for improvement?

* Percentages not calculated due to multiple selections.

Thank you very much for your cooperation. Bob Cirulli